

CLAIMS

1. A piezoelectric electroacoustic transducer comprising:

a rectangular piezoelectric diaphragm that is supplied with a periodic signal across electrodes thereof to bend and vibrate in a thickness direction;

a casing having supports on an inner portion thereof to support the four corners of the bottom surface of the piezoelectric diaphragm;

terminals fixed to the casing, each having an inner connection portion exposed near the supports;

a first elastic adhesive applied between the periphery of the piezoelectric diaphragm and the inner connection portions of the terminals to secure the piezoelectric diaphragm to the casing;

a conductive adhesive applied between the electrodes of the piezoelectric diaphragm and the inner connection portions of the terminals across the top surface of the first elastic adhesive to electrically connect the electrodes of the piezoelectric diaphragm to the inner connection portions of the terminals; and

a second elastic adhesive filling and sealing a gap between the periphery of the piezoelectric diaphragm and the inner portion of the casing; wherein

an overamplitude-preventing receiver is disposed on the casing

to limit the amplitude of vibration of the piezoelectric diaphragm to a predetermined range, the overamplitude-preventing receiver is positioned closer to the center of the piezoelectric diaphragm than the supports; wherein

the second elastic adhesive fills a gap between the bottom surface of the piezoelectric diaphragm and the top surface of the overamplitude-preventing receiver.

2. The piezoelectric electroacoustic transducer according to Claim 1, wherein the distance between the bottom surface of the piezoelectric diaphragm and the top surface of the overamplitude-preventing receiver is 0.01 to 0.2 mm.

3. The piezoelectric electroacoustic transducer according to Claim 1 or 2, wherein the first elastic adhesive has a Young's modulus of 500×10^6 Pa or less after being cured and the second elastic adhesive has a Young's modulus of 30×10^6 Pa or less after being cured.

4. The piezoelectric electroacoustic transducer according to any of Claims 1 to 3, wherein

the first elastic adhesive is a urethane adhesive; and
the second elastic adhesive is a silicone adhesive.